NAME: CLASS PERIOD: DATE:

Investigation

ENERGY DIARY

Background Information

Energy comes in six forms: chemical, electrical, radiant, mechanical, nuclear, and thermal. Each form can be converted or changed into any of the other forms. For example, when wood burns, its chemical energy changes into thermal (heat) energy and radiant (light) energy.

Chemical energy – Energy stored in the bonds between atoms in molecules.
Examples: fuels, food.

Electrical energy – The energy in moving electrons.
Examples: residential electric current, lightning.

Radiant energy – Produced when atoms absorb energy from an outside source and release (or "emit") this energy as electromagnetic radiation.
Examples: sunlight, light bulb, x-ray.

Mechanical energy – The energy of moving objects.
Examples: a wind-up car, a windmill.

Nuclear energy – Energy stored in the bonds between nuclei in atoms and released through fission or fusion.
Example: nuclear power plant.

Thermal energy – Heat produced by moving or vibrating molecules.
Examples: kitchen range, water heater.

In this energy diary you will relate the forms of energy to some of your daily activities.

Problem *(fill in problem):* _____

_____

Procedure

Fill in the energy diary for 24 hours, starting from the time you wake up.

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ENERGY DIARY INVESTIGATION CONT.

Observations

Time	Device	Energy Displayed	Forms of Energy

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ENERGY DIARY
INVESTIGATION CONT.

Conclusion

1. All activities require the use of _____.

2. When energy is put to work it often changes _____.

Application

1. What form of energy is being used when popcorn is popped in a skillet over a camp fire?

   _____

2. Explain the flow and forms of energy as the popcorn cooks._____

   _____

3. When you eat popcorn, it supplies what form of energy to your body? _____

   _____

4. What are the effects of the energy supplied to your body by the popcorn? _____

   _____